

WHAT IS CLAIMED IS:

1. An ejector cycle comprising:

a compressor for compressing refrigerant;

a high-pressure heat exchanger disposed outside of a compartment, for radiating heat of high-pressure refrigerant discharged from the compressor;

a low-pressure heat exchanger disposed in the compartment for evaporating low-pressure refrigerant after being decompressed;

an ejector including a nozzle for decompressing and expanding high-pressure refrigerant flowing from the high-pressure heat exchanger, the ejector sucking gas refrigerant evaporated in the low-pressure heat exchanger by using a refrigerant flow jetted from the nozzle, and increasing a pressure of the refrigerant to be sucked to the compressor;

a gas-liquid separator for separating refrigerant discharged from the ejector into gas refrigerant and liquid refrigerant, the gas-liquid separator having a gas refrigerant outlet connected to a suction port of the compressor, and a liquid refrigerant outlet connected with the low-pressure heat exchanger; and

a throttle for decompressing refrigerant flowing from the gas-liquid separator into the low-pressure heat exchanger,

wherein the throttle is provided in the compartment.

2. The ejector cycle according to claim 1, further comprising:

an interior refrigerant pipe disposed in the compartment to be connected to the low-pressure heat exchanger; and

an exterior refrigerant pipe disposed outside the compartment to be connected to the gas-liquid separator, wherein:

the interior refrigerant pipe and exterior refrigerant pipe are connected to a connection portion; and

the throttle is disposed in the connection portion.

3. The ejector cycle according to claim 2, wherein the throttle is an orifice provided in the connection portion.

4. The refrigerant cycle according to claim 1, further comprising:

an interior refrigerant pipe that is connected to the interior heat exchanger at a connection portion,

wherein the throttle is provided in the connection portion between the interior refrigerant pipe and the low-pressure heat exchanger.

5. The ejector cycle according to claim 4, wherein the throttle is an orifice provided in the connection portion.

6. The ejector cycle according to claim 1, wherein:

the low-pressure heat exchanger is connected to the gas-liquid separator through a refrigerant pipe; and

the throttle is disposed in the refrigerant pipe adjacent

to the low-pressure heat exchanger.

7. The ejector cycle according to claim 1, further comprising

an additional heat exchanger that is disposed to perform heat exchange between refrigerant flowing from the gas-liquid separator to the low-pressure heat exchanger and refrigerant to be sucked to the ejector from the low-pressure heat exchanger,

wherein the throttle is disposed in a refrigerant passage through which liquid refrigerant is introduced from the gas-liquid separator to an inlet of the low-pressure heat exchanger, between an outlet of the additional heat exchanger and the inlet of the low-pressure heat exchanger.

8. The ejector cycle according to claim 1, wherein:

the low-pressure heat exchanger includes a plurality of tubes extending substantially vertically, an upper header tank connected to upper ends of the tubes to communicate with the tubes, and a lower header tank connected to lower ends of the tubes to communicate with the tubes;

the low-pressure heat exchanger has a refrigerant inlet from which refrigerant is introduced into the low-pressure heat exchanger; and

the refrigerant inlet is provided in the lower header tank.

9. An ejector cycle comprising:

a compressor for compressing refrigerant;

a high-pressure heat exchanger disposed outside of a compartment, for radiating heat of high-pressure refrigerant discharged from the compressor;

a low-pressure heat exchanger disposed in the compartment for evaporating low-pressure refrigerant after being decompressed;

an ejector including a nozzle for decompressing and expanding high-pressure refrigerant flowing from the high-pressure heat exchanger, the ejector sucking gas refrigerant evaporated in the low-pressure heat exchanger by using a refrigerant flow jetted from the nozzle, and increasing a pressure of refrigerant to be sucked into the compressor; and

a gas-liquid separator for separating refrigerant discharged from the ejector into gas refrigerant and liquid refrigerant, the gas-liquid separator having a gas refrigerant outlet connected to a suction port of the compressor, and a liquid refrigerant outlet connected with the low-pressure heat exchanger, wherein:

the low-pressure heat exchanger includes a plurality of tubes extending substantially vertically, an upper header tank connected to upper ends of the tubes to communicate with the tubes, and a lower header tank connected to lower ends of the tubes to communicate with the tubes;

the low-pressure heat exchanger has a refrigerant inlet from which refrigerant is introduced into the low-pressure

heat exchanger; and

the refrigerant inlet is provided in the lower header tank.

10. An arrangement structure of an ejector cycle in a vehicle having a passenger compartment and an engine compartment partitioned from each other, the arrangement structure comprising:

a compressor disposed in the engine compartment, for compressing refrigerant;

a high-pressure heat exchanger disposed in the engine compartment, for radiating heat of high-pressure refrigerant discharged from the compressor;

a low-pressure heat exchanger disposed in the passenger compartment, for evaporating low-pressure refrigerant after being decompressed;

an ejector disposed in the engine compartment, which includes a nozzle for decompressing and expanding high-pressure refrigerant flowing from the high-pressure heat exchanger, the ejector sucking gas refrigerant evaporated in the low-pressure heat exchanger by using a refrigerant flow jetted from the nozzle, and increasing a pressure of refrigerant to be sucked to the compressor;

a gas-liquid separator disposed in the engine compartment, for separating refrigerant discharged from the ejector into gas refrigerant and liquid refrigerant, the gas-liquid separator having a gas refrigerant outlet connected to a

suction port of the compressor, and a liquid refrigerant outlet connected with the low-pressure heat exchanger; and

a throttle for decompressing refrigerant flowing from the gas-liquid separator into the low-pressure heat exchanger,

wherein the throttle is provided in the passenger compartment.

11. The arrangement structure according to claim 10, further comprising

an interior refrigerant pipe that is connected to the interior heat exchanger at a connection portion in the passenger compartment,

wherein the throttle is provided in the connection portion between the interior refrigerant pipe and the low-pressure heat exchanger.

12. The ejector cycle according to claim 1, further comprising:

an interior refrigerant pipe disposed in the passenger compartment to be connected to the low-pressure heat exchanger; and

an exterior refrigerant pipe disposed in the engine compartment to be connected to the gas-liquid separator,

wherein the interior refrigerant pipe and the exterior refrigerant pipe are connected to a connection portion in the passenger compartment, and the throttle is disposed in the connection portion.